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1: *J Chromatogr B Biomed Sci Appl* 2000 Jul 7;744(1):1-8

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Direct quantification of AD-36 adenovirus DNA by capillary electrophoresis with laser-induced fluorescence.

Kolesar JM, Miller JA, Dhurandhar NV, Atkinson RL

School of Pharmacy, University of Wisconsin, Madison 53706, USA.
jmkolesar@pharmacy.wisc.edu

Related Resources

[\[Medline record in process\]](#)

An adenovirus, AD-36, has been linked to human adiposity and a sensitive and reliable quantitative method is required to assess AD-36 viral loads. This report describes direct detection of AD-36 viral DNA, which is the first method to quantitate DNA without amplification. Total genomic DNA is hybridized with an AD-36 specific fluorescently labeled probe and analyzed by capillary electrophoresis with laser-induced fluorescence. The minimum detectable quantity is 10.3 ng/ml, corresponding to 282 copies of AD-36 with a precision of 1-6%. These results indicate that direct detection with capillary electrophoresis with laser-induced fluorescence (CE-LIF) is a reliable and sensitive method for quantifying AD-36 viral DNA.

PMID: 10985560, UI: 20439744

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d 15 1-6 all

L5 ANSWER 1 OF 6 MEDLINE
AN 2002617052 MEDLINE
DN 22255142 PubMed ID: 12368411
TI Human **adenovirus** Ad-36 promotes weight gain in male rhesus and marmoset monkeys.
AU Dhurandhar Nikhil V; Whigham Leah D; Abbott David H; Schultz-Darken Nancy J; Israel Barbara A; Bradley Steven M; Kemnitz Joseph W; Allison David B; Atkinson Richard L
CS Department of Nutrition and Food Science and the Center for Molecular Medicine and Genetics, Wayne State University, Detroit, MI, USA.. ndhurand@sun.science.wayne.edu
SO JOURNAL OF NUTRITION, (2002 Oct) 132 (10) 3155-60.
Journal code: 0404243. ISSN: 0022-3166.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200210
ED Entered STN: 20021011
Last Updated on STN: 20021030
Entered Medline: 20021029
AB Although **obesity** has multiple etiologies, an overlooked possibility is an infectious origin. We previously identified two viruses, SMAM-1, an avian **adenovirus** (Ad), and Ad-36, a human **adenovirus**, that produce a syndrome of visceral **obesity**, with paradoxically decreased serum cholesterol and triglycerides in chickens and mice. In the two studies presented in this paper, we used nonhuman primates to investigate the adiposity-promoting potential of Ad-36. In study 1, we observed spontaneously occurring Ad-36 antibodies in 15 male rhesus monkeys, and a significant longitudinal association of positive antibody status with weight gain and plasma cholesterol lowering during the 18 mo after viral antibody appearance. In study 2, which was a randomized controlled experiment, three male marmosets inoculated with Ad-36 had a threefold body weight gain, a greater fat gain and lower serum cholesterol relative to baseline ($P < 0.05$) than three uninfected controls at 28 wk postinoculation. These studies illustrate that the adiposity-promoting effect of Ad-36 occurs in two nonhuman primate species and demonstrates the usefulness of nonhuman primates for further evaluation of Ad-36-induced adiposity.
CT Check Tags: Animal; Human; Male; Support, Non-U.S. Gov't
*Adenoviridae Infections: CO, complications
*Adenoviruses, Human
Adenoviruses, Human: IM, immunology
Adenoviruses, Human: PY, pathogenicity
Adipose Tissue: VI, virology
Antibodies, Viral: BL, blood
Callitrichinae
*Cholesterol: BL, blood
Disease Models, Animal
Macaca mulatta
 Obesity: ET, etiology
 Obesity: IM, immunology
 *Obesity: VI, virology
Random Allocation
Weight Gain
RN 57-88-5 (Cholesterol)
CN 0 (Antibodies, Viral)
L5 ANSWER 2 OF 6 MEDLINE

ISSN: 0892-6638.

DT Conference; Abstract
LA English

L13 ANSWER 9 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1996:210359 BIOSIS
DN PREV199698766488
TI Comparison of serotonin agonists in combination with phentermine for treatment of obesity.
AU Dhurandhar, N. V.; Atkinson, R. L.
CS Univ. Wisconsin, Madison, WI 53706 USA
SO FASEB Journal, (1996) Vol. 10, No. 3, pp. A561.
Meeting Info.: Experimental Biology 96, Part II Washington, D.C., USA
April 14-17, 1996
ISSN: 0892-6638.
DT Conference
LA English

L13 ANSWER 10 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1995:256581 BIOSIS
DN PREV199598270881
TI Serum cholesterol and triglyceride levels in weight reduction program dropouts.
AU Dhurandhar, N. V. (1); Kulkarni, P. R.
CS (1) Dep. Med., Univ. Wis. Med. Sch., Madison, WI 53706 USA
SO International Journal of Food Sciences and Nutrition, (1995) Vol. 46, No. 1, pp. 17-20.
ISSN: 0963-7486.
DT Article
LA English

L13 ANSWER 11 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1992:391505 BIOSIS
DN BA94:63680
TI EFFECT OF ADENOVIRUS INFECTION ON ADIPOSITY IN CHICKEN.
AU DHURANDHAR N V; KULKARNI P; AJINKYA S M; SHERIKAR A
CS DEP. FOOD TECHNOL., DEP. CHEM. TECHNOL., DEP. OF CHEMICAL TECHNOL., UNIV. OF BOMBAY, MATUNGA, BOMBAY 400 019, INDIA.
SO VET MICROBIOL, (1992) 31 (2-3), 101-107.
CODEN: VMICDQ. ISSN: 0378-1135.
FS BA; OLD
LA English

L13 ANSWER 12 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1992:352765 BIOSIS
DN BA94:44990
TI PREVALENCE OF OBESITY IN BOMBAY.
AU DHURANDHAR N V; KULKARNI P R
CS 69 DIXIT ROAD, VILE PARLE E , BOMBAY 400 057, INDIA.
SO INT J OBES, (1992) 16 (5), 367-375.
CODEN: IJOBDP. ISSN: 0307-0565.
FS BA; OLD

d 113 8 all

L13 ANSWER 8 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1997:185023 BIOSIS
DN PREV199799484226
TI Evidence for an association of a virus with obesity in humans.
AU Dhurandhar, N. V.; Augustus, A.; Atkinson, R., L.
CS Univ. Wisconsin Med. Sch., Madison, WI 53706 USA
SO FASEB Journal, (1997) Vol. 11, No. 3, pp. A230.
Meeting Info.: Annual Meeting of the Professional Research Scientists on
Experimental Biology 97 New Orleans, Louisiana, USA April 6-9, 1997
ISSN: 0892-6638.
DT Conference; Abstract
LA English
CC General Biology - Symposia, Transactions and Proceedings of Conferences,
Congresses, Review Annuals 00520
Physiology, General and Miscellaneous - General *12002
Metabolism - Lipids *13006
Metabolism - Sterols and Steroids *13008
Metabolism - Proteins, Peptides and Amino Acids *13012
Nutrition - Malnutrition; Obesity *13203
Virology - Animal Host Viruses *33506
BC Adenoviridae 02601
Hominidae *86215
IT Major Concepts
Metabolism; Microbiology; Nutrition; Physiology
IT Chemicals & Biochemicals
CHOLESTEROL
IT Miscellaneous Descriptors
BODY MASS INDEX; CHOLESTEROL; LOW DENSITY LIPOPROTEIN; METABOLISM;
NUTRITIONAL DISEASE; OBESITY; TRIGLYCERIDES
ORGN Super Taxa
Adenoviridae: Viruses; Hominidae: Primates, Mammalia, Vertebrata,
Chordata, Animalia
ORGN Organism Name
adenovirus (Adenoviridae); human (Hominidae)
ORGN Organism Superterms
animals; chordates; humans; mammals; microorganisms; primates;
vertebrates; viruses

d his

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FILE 'MEDLINE' ENTERED AT 14:50:00 ON 11 JAN 2001

L1 263316 S 1980/PY
L2 O S WIGAND/AU AND L1
L3 O S ADENCOVIRUS TYPE 36
L4 O S ADENOVIRUS TYPE 36
L5 O S AD-36P
L6 15 S 36P
L7 O S L1 AND L6
L8 51956 S OBESITY
L9 15617 S ADENOVIRUS
L10 22 S L8 AND L9
E DHURANDHAR N V/AU
L11 6 S E1
L12 8 S E3

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E DHURANDHAR N V/AU
L13 12 S E3
E WIGAND/AU
L14 0 S ARCHIVES OF VIROLOGY/SO AND WIGAND/AU

d 113 1-12

L13 ANSWER 1 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 2000:413802 BIOSIS
DN PREV200000413802
TI Increased adiposity in animals due to a human virus.
AU **Dhurandhar, N. V.** (1); Israel, B. A.; Kolesar, J. M.; Mayhew, G.
F.; Cook, M. E.; Atkinson, R. L.
CS (1) Department of Nutrition and Food Science, Wayne State University,
3009 Science Hall, Detroit, MI USA
SO International Journal of Obesity, (August, 2000) Vol. 24, No. 8, pp.
989-996. print.
ISSN: 0307-0565.
DT Article
LA English
SL English

L13 ANSWER 2 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 2000:349954 BIOSIS
DN PREV200000349954
TI Weight gain and reduced serum lipids in non-human primates due to a human
virus.
AU Atkinson, R. L. (1); **Dhurandhar, N. V.** (1); Abbott, D. H. (1);
Darken, N. (1)
CS (1) University of Wisconsin, Madison, WI, 53706 USA
SO International Journal of Obesity, (May, 2000) Vol. 24, No. Supplement 1,
pp. S39. print.
Meeting Info.: 10th European Congress on Obesity of the European
Association for the Study of Obesity Antwerp, Belgium May 24-27, 2000
European Association for the Study of Obesity
. ISSN: 0307-0565.
DT Conference
LA English
SL English

L13 ANSWER 3 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 2000:298325 BIOSIS
DN PREV200000298325
TI Pathophysiology of the human adenovirus that induces adiposity in
animals.
AU **Dhurandhar, N. V.**; Israel, B. A.; Kolesar, J. M.; Atkinson, R.
L.
SO FASEB Journal, (March 15, 2000) Vol. 14, No. 4, pp. A732. print.
Meeting Info.: Annual Meeting of Professional Research Scientists:
Experimental Biology 2000 San Diego, California, USA April 15-18, 2000
Federation of American Societies for Experimental Biology
. ISSN: 0892-6638.
DT Conference
LA English
SL English

L13 ANSWER 4 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 2000:109722 BIOSIS
DN PREV200000109722
TI Initial weight loss as a predictor of response to obesity drugs.
AU **Dhurandhar, N. V.**; Blank, R. C.; Schumacher, D.; Atkinson, R. L.
(1)
CS (1) University of Wisconsin, 1415 Linden Drive, Nutritional Sciences